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Lieferung & Zahlungsart

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Zuschläge

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L-Aspartic acid

Cat. No.: HY-N0666

CAS No.: 56-84-8

Molecular Formula: $C_4H_7NO_4$

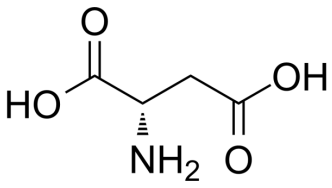
Molecular Weight: 133.1

Target: Endogenous Metabolite

Pathway: Metabolic Enzyme/Protease

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	2 years
	-20°C	1 year



SOLVENT & SOLUBILITY

In Vitro

1M NaOH : 100 mg/mL (751.31 mM; ultrasonic and adjust pH to 12 with NaOH)

H_2O : 2 mg/mL (15.03 mM; ultrasonic and warming and heat to 60°C)

DMSO : < 1 mg/mL (ultrasonic;warming;heat to 80°C) (insoluble or slightly soluble)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	7.5131 mL	37.5657 mL	75.1315 mL
5 mM	1.5026 mL	7.5131 mL	15.0263 mL
10 mM	0.7513 mL	3.7566 mL	7.5131 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: PBS
   Solubility: 1 mg/mL (7.51 mM); Clear solution; Need ultrasonic and warming and heat to 60°C

BIOLOGICAL ACTIVITY

Description L-Aspartic acid is is an amino acid, shown to be a suitable proagent for colon-specific agent deliverly.

IC_{50} & Target Microbial Metabolite | Human Endogenous Metabolite

In Vivo

L-Aspartic acid is shown to be a suitable prodrug for colon-specific drug deliverly[1]. L-[^{3}H]Asp remaining in the brain at 5 min is increased by 206 and 178% by preadministration of 100 mM L-Aspartic acid and 100 mM L-Glu, respectively, whereas 100 mM D-Asp does not affect L-[^{3}H]Asp efflux transport. That value for L-[^{3}H]Glu at 20 min is increased by 145 and 156% by coadministration with 100 mM L-Aspartic acid and 100 mM L-Glu, respectively, but not by D-Asp. It is interesting that the apparent efflux rate of L-Aspartic acid across the BBB is sevenfold faster than that of L-Glu[2].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Nat Protoc. 2021 Jan;16(1):431-457.
- Redox Biol. 2024 Mar 4:71:103112.

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REFERENCES

[1]. Hosoya K, et al. Blood-brain barrier produces significant efflux of L-aspartic acid but not D-aspartic acid: in vivo evidence using the brain efflux index method. J Neurochem. 1999 Sep;73(3):1206-11.

[2]. Leopold CS, et al. In vivo pharmacokinetic study for the assessment of poly(L-aspartic acid) as a drug carrier for colon-specific drug delivery. J Pharmacokinet Biopharm. 1995 Aug;23(4):397-406.

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